

## REMARKS

### Claims

Claims 1, 3, 5-9, and 11-16 are pending, and stand rejected.

Claim 1 was amended to cite a platinum catalyst supported by [0001] line 7 among others.

### 35 U.S.C. §112

Claim 3 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim 3 has been cancelled.

### 35 U.S.C. §103

#### Hammerschmidt in view of Fukuda and JP 10-275698

Claims 1, 3, 5-6, and 11-14, stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hammerschmidt (US 6,010,798) in view of Fukuda (US 6,849,306), Fukuda US 2003/02032136, and JP 10-275698, JP H07-062546 and Schutze. These references fail to create a *prima facie* case of obviousness over Applicant's claims, as amended.

In Summary:

#### **Hammerschmidt (US 6,010,798) –**

- a) Mentions generally several methods to apply a platinum catalyst in a thin layer, using a “plasma-chemical “ process, or sputtering.
- b) The reference is silent on details of the process (claimed by Applicant) such as where the plasma is formed in relation to the substrate and electrodes, the nozzle type, the number of power supplies, the nature of the gas stream or streams (mixed random or other), the use of an inert gas or not, the type of substrate, the arrangement of the electrodes, etc. The Hammerschmidt reference is also silent on the pressure used in the process, though refers repeatedly to low pressure – teaching away from Applicant's claims.

**Fukuda (US 6,010,798) –**

- a) Describes plasma treatment at atmospheric pressure. The improvement is that the reactive gas does not touch surface of either electrode - turbulent flow is reduced or minimized. Examples all use Argon, though nitrogen is included as an inert gas.
- b) Applicants claim the exact opposite - a mixed randomized stream. This process does not work for platinum, though 50 other metals are specifically mentioned.

**Fukuda (2003/02032136)**

- a) Teaches an atmospheric deposition process work with nitrogen, a mixed gas stream, and atmospheric pressure.
- b) But to make the atmospheric deposition work with nitrogen, two sets of power supply are needed. (Applicant claims a single power supply).

**JP 10-275698 (Abstract)**

- a) Generates a plasma at atmospheric conditions.
- b) Requires a process using helium, even if it is turned off part way through – the ‘698 method cannot be done without the use of a noble gas, as claimed by Applicant.

**JP H07-062546 (Abstract)**

- a) Describes an atmospheric system for plasma surface treatment with a recycle..
- b) The system uses inert gas. Applicant requires a method without noble gas

**Schutze**

- a) This is a review article introducing the plasma jet which “uses flowing helium” (p 1685, second col., line 21.) The Schutze plasma jet process requires helium.
- b) Applicant’s claim a process having no noble gas.

In each individual reference, while there is some similarities to Applicant’s claimed Method, each reference also contains a teaching away from Applicant’s claimed method to obtain a usable coating (with the exception of the Hammerschmidt reference which

is silent on details).

The 35 U.S.C. §103 rejection is to a combination of these references, each individually teaching part of Applicant's claims, but also each individually teaching away from Applicant's claims. To not take the reference as a whole, but only taking the teachings for, without the teachings against, would be improper use of the references and of the statute. According to MPEP 2143.01, the fact that references can be combined or modified is not sufficient to establish prima facie obviousness, unless the prior art also suggests the desirability of the combination. (MPEP 2143.01). Since each reference contains a teaching away from Applicant's claims, a combination of two or more teachings away only teaches further away.

The Examiner has painfully taken many unrelated references, teaching a multitude of different methods for different methods. Picking and choosing specific elements from various prior art references to create the claimed invention is not proper §103 analysis. Applicant contends that the obviousness rejection in this case is a classic example of hindsight, in effect using Applicant's claims as a template on which selected bits of prior art teachings can be assembled. This is not a proper basis for rejection of claims. "One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine*, 5 U.S.P.Q. 1596, 1600 (Fed. Cir. 1988).

Thus each of the cited reference, alone or combined fails to teach all of Applicant's claim limitations, and instead each reference alone teaches away from Applicant's claims, with a combination of references teaching even further away from Applicant's claims.

Hammerschmidt in view Fukuda, Fukuda, JP 10-275698, JP H087-06254, and Schutze further in view of:

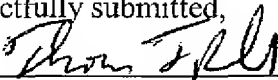
Yasumoto (Claim 7)  
Nanaumi (Claims 8 and 9)  
Kamo (Claim 10)  
Haug (Claim 16)

As shown above, the Hammerschmidt in view Fukuda, Fukuda, JP 10-275698, JP H087-06254, and Schutze fails to teach or suggest all of Applicant's claim limitations, in particular: A platinum catalyst deposited on a membrane by discharge enhanced chemical vapor deposition (DECVD); at atmospheric pressure, without adding noble gases, where the reactants included in a carrier gas in a single randomized stream pass directly between 2 or more electrodes having a single power source. The cited additional references, are secondary references used to teach a specific limitation. None of these references heals the deficiencies of the previously cited references to teach or suggest all of Applicant's claim limitations (as amended). Therefore, no *prima facie* case of obviousness is presented.

#### Conclusion

The references cited, either alone or in combination, fail to teach or suggest all of Applicant's claim limitations, and therefore fail to present a *prima facie* case of obviousness over Applicant's amended claims. For the above reasons the present claims 1, 3, 5-9, and 11-16 are believed by the Applicant to be novel and unobvious over the prior art, thus the claims herein should be allowable to the Applicant. Accordingly, reconsideration and allowance are requested.

Respectfully submitted,



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